

REMARKS

Status of the Claims

Claims 1, 7, 26 and 31 are pending, with Claim 1 being the sole independent claim. Claims 4-6, 10-17 and 27-30 have been canceled without prejudice to or disclaimer of the subject matter recited therein. Claims 1 and 7 have been amended. Claim 31 has been added. Support for the new claim and claim changes can be found in the original disclosure, for example, in Figure 7 and the accompanying description, and therefore no new matter has been added. More specifically: the receiving unit of amended Claim 1 corresponds, but is not limited to, unit 701 shown in Figure 7; the rate control circuit of amended Claim 1 corresponds, but is not limited to, unit 710 shown in Figure 7; and the motion compensation prediction unit of amended Claim 1 corresponds, but is not limited to, unit 719 shown in Figure 7. In addition, new Claim 31 is supported at least by paragraph [0053] of the specification.

Requested Action

Applicant respectfully requests the Examiner to reconsider and withdraw the outstanding objection and rejections in view of the foregoing amendments and the following remarks.

Information Disclosure Statement Objection

The Office Action objects to the April 28, 2009 Information Disclosure Statement because no translation of the Japanese Office Action was provided. In response, Applicant is filing herewith a translation of the Japanese Office Action cited in the April 28, 2009

Information Disclosure Statement along with another Information Disclosure Statement.

Applicant. Applicant respectfully requests that the Japanese Office Action now be considered and made of record.^{1/}

Claim Rejections

Claims 1, 7, 10-13, 15, 17, and 26-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,987,179 (Riek et al.) in view of U.S. Patent No. 4,546,390 (Konishi et al.). Claims 4-6 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Riek et al. in view of Konishi et al., and Japanese Publication No. 2000-050263 (Asada et al.).

In response, while not conceding the propriety of the rejections, Claims 4-6, 10-17 and 27-30 have been canceled without prejudice and independent Claim 1 has been amended. Applicant submits that as amended, Claim 1 is allowable for the following reasons.

Independent Claim 1 relates to an image processing apparatus for encoding input motion-image data by using intra-frame coding and inter-frame coding, and encoding input still-image data as pictures for a predetermined period of time by using the same encoding

^{1/}Page 2 of the July 27, 2009 Office Action states, in referring to the April 28, 2009 Information Disclosure Statement: "It has been placed in the application file, but the information referred to therein has not been considered". However, on the accompanying Information Disclosure Citation, all of the references, except for the Japanese Office Action, have the Examiner's initials adjacent thereto, and at the bottom the Examiner has stated "All references considered except where lined through". Therefore, Applicant interprets the statement on page 2 of the Office Action as meaning that only the Japanese Office Action has not been considered. Accordingly, Applicant respectfully requests that the Examiner confirm in the next Office Action that all of the references cited in the April 28, 2009 Information Disclosure Statement have been considered.

method as the encoding method of the motion-image data. The image processing apparatus comprises a resolution converting circuit, a control-signal receiving unit, a still-image-recording control circuit, a still-image-data memory unit, a circuit having a switch, and an encoding unit. The control-signal receiving unit is configured to receive a still-image-recording control signal indicating that still-image recording rather than motion-image recording is to occur. The still-image-recording control circuit controls actuation of still-image recording in response to receipt of a still-image-recording control signal by the control-signal receiving unit. The encoding unit is configured to generate intra-frame coded data and inter-frame coded data from still-image data provided by the circuit and generate from one still image, a plurality of groups of pictures in which each group of pictures includes the intra-frame coded data and a plurality of the inter-frame coded data. The encoding unit generates the inter-frame coded data, which includes bi-directionally predictive frames, by encoding a difference between the input still-image data and predicted data converted from the generated intra-frame coded data and inter-frame coded data previously, and sets a start group of pictures among the generated plurality of groups of pictures as a closed group of pictures.

Claim 1 has been amended to recite a receiving unit configured to receive image data. Claim 1 has also been amended to recite a rate control circuit configured to control a code amount in encoding, and to output a feedback signal when the amount of codes generated in encoding of the received image data is over a predetermined threshold value.

Claim 1 has been further amended to recite that a) the resolution converting circuit is configured to reduce a resolution of the received image data in response to receipt of the feedback signal, b) the still-image-recording control circuit controls actuation of the

resolution converting circuit so as to cause the resolution converting circuit to refrain from reducing the resolution of the received image data, c) the still-image-data memory unit is configured to store the received image data as still-image data in response to an instruction from the still-image-recording control circuit and continuously output the stored still-image data during a predetermined period, and d) the circuit has a switch that is controlled to provide the stored still-image data continuously received from the still-image-data memory unit in place of the received image data, in response to the instruction from the still-image-recording control circuit.

Claim 1 has further been amended to recite a motion compensation prediction unit configured to refrain from performing motion compensation performed at the time of encoding of the received image data during the predetermined period in response to the instruction from the still-image-recording control circuit.

By this arrangement, the apparatus can 1) refrain from reducing the resolution of received image data (which can be reduced in response to a feedback signal outputted when the amount of codes generated in encoding of the received image data is over a predetermined threshold value) in response to receipt of a still-image-recording control signal by a still-image-recording control circuit, 2) store the resolution-unreduced, received image data as still-image data by a still-image-data memory unit in response to an instruction from the still-image-recording control circuit, and 3) encode the stored still-image data without performing motion compensation with the motion compensation prediction unit during a predetermined period during which the stored still-image data is continuously output.

In contrast, the citations to Riek et al. and Konishi et al. are not understood to relate to the concept of 1) refraining from reducing the resolution of received image data (which can be reduced in response to a feedback signal outputted when the amount of codes generated in encoding of the received image data is over a predetermined threshold value) in response to receipt of a still-image-recording control signal by a still-image-recording control circuit, 2) storing the resolution-unreduced, received image data as still-image data by a still-image-data memory unit in response to an instruction from the still-image-recording control circuit, and 3) encoding the stored still-image data without performing motion compensation with the motion compensation prediction unit during a predetermined period during which the stored still-image data is continuously output.

Therefore, the citations to Riek et al. and Konishi et al. are not understood to disclose or suggest the combination of (i) a rate control circuit configured to control a code amount in encoding, and to output a feedback signal when the amount of codes generated in encoding of the received image data is over a predetermined threshold value, (ii) a resolution converting circuit configured to reduce a resolution of the received image data in response to receipt of the feedback signal, (iii) a still-image-recording control circuit controlling actuation of still-image recording in response to receipt of a still-image-recording control signal by the control-signal receiving unit and controlling actuation of the resolution converting circuit so as to cause the resolution converting circuit to refrain from reducing the resolution of the received image data, (iv) a still-image-data memory unit configured to store the received image data as still-image data in response to an instruction from the still-image-recording control circuit and continuously output the stored still-image data during a predetermined period, and (v) a motion compensation prediction unit

configured to refrain from performing motion compensation performed at the time of encoding of the received image data during the predetermined period in response to the instruction from the still-image-recording control circuit, as recited by amended Claim 1.

The Office Action admits that the Riek et al. citation does not disclose the feature of converting received motion image data to a different resolution and for that reason cites the Konishi et al. document. But this citation is understood to merely disclose reducing the quantity of information per frame in the movie mode as compared with the still mode, as discussed at column 3, lines 30-43 of Konishi et al., thereby increasing the processing speed for each frame in the movie mode without substantially increasing the visual image degradation, since a decrease in resolution can be more difficult to discern when viewing a motion picture, as compared to a still image. Neither citation is understood to disclose or suggest the rate control circuit, the resolution converting circuit, the still-image-recording control circuit, the still-image-data memory unit, and the motion compensation prediction unit recited by amended Claim 1.

Since amended Claim 1 recites at least one feature not understood to be disclosed or suggested by the citations Riek et al. and Konishi et al., Applicant submits that the Office has not yet satisfied its burden of proof to establish a prima facie case of obviousness against amended Claim 1. Therefore, Applicant respectfully requests that the rejection of amended Claim 1 be withdrawn.

The dependent claims are also submitted to be patentable, due to their dependency from the independent base claims, as well as due to additional features that are recited. Individual consideration of the dependent claims is respectfully solicited.

Conclusion

In view of the above amendments and remarks, the application is now in allowable form. Therefore, early passage to issue is respectfully solicited.

Any fee required in connection with this paper should be charged to Deposit Account No. 06-1205.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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